

The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent, with the one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ EP

# PCT

## CHAPTER II

### DEMAND

under Article 31 of the Patent Cooperation Treaty:

The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

For International Preliminary Examining Authority use only		
Identification of IPEA		Date of receipt of DEMAND
<b>Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION</b>		Applicant's or agent's file reference GI-003 PCT
International application No. PCT/EP00/09130	International filing date (day/month/year) 18 September 2000 (18/09/2000)	(Earliest) Priority date (day/month/year) 16 September 1999 (16/09/1999)
Title of invention A New Assay to Detect Substances Useful for the Therapy of Cancer and Infectious Diseases		
<b>Box No. II APPLICANT(S)</b>		
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V. Hofgartenstrasse 8 80539 München Germany		Telephone No.:
		Facsimile No.:
		Teleprinter No.:
State (that is, country) of nationality: DE		State (that is, country) of residence: DE
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  NIELSEN, Erik Im Schutzecker 9 69181 Leimen Germany		
State (that is, country) of nationality: US		State (that is, country) of residence: DE
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)  CHRISTOPHORIDIS, Savvas Boxberggring 107 69126 Heidelberg Germany		
State (that is, country) of nationality: GR		State (that is, country) of residence: DE
<input checked="" type="checkbox"/> Further applicants are indicated on a continuation sheet.		

## Continuation of Box No. II APPLICANT(S)

*If none of the following sub-boxes is used, this sheet should not be included in the demand.*

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

MURPHY, Carol  
Alexandrou Papenastasiou 4  
45 500 Anatoli, Ioannina  
Greece

State (that is, country) of nationality:

IE

State (that is, country) of residence:

GR

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

ZERIAL, Marino  
Heuauerweg 30/1  
69124 Heidelberg  
Germany

State (that is, country) of nationality:

IT

State (that is, country) of residence:

DE

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

DE RENZIS, Stefano  
Meyerhofstrasse 1  
69117 Heidelberg  
Germany

State (that is, country) of nationality:

IT

State (that is, country) of residence:

DE

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

State (that is, country) of nationality:

State (that is, country) of residence:

☐

Further applicants are indicated on another continuation sheet.

**Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**The following person is ☒ agent ☐ common representativeand ☐ has been appointed earlier and represents the applicant(s) also for international preliminary examination.☐ is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked☒ is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.Name and address: *(Family name followed by given name; for a legal entity, full official designation.  
The address must include postal code and name of country.)*DEHMEL, Albrecht  
DEHMEL & BETTENHAUSEN  
Patentanwälte  
Müllerstr. 1  
80469 München  
Germany

Telephone No.:

0049-(0)89-238852-6

Facsimile No.:

0049-(0)89-238852-70

Teleprinter No.:

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.**Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION****Statement concerning amendments:\***

1. The applicant wishes the international preliminary examination to start on the basis of:

☐ the international application as originally filedthe description ☐ as originally filed☐ as amended under Article 34the claims ☐ as originally filed☐ as amended under Article 19 (together with any accompanying statement)☐ as amended under Article 34the drawings ☐ as originally filed☐ as amended under Article 342. ☐ The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.3. ☐ The applicant wishes the start of the international preliminary examination to be postponed until the expiration of 20 months from the priority date unless the International Preliminary Examining Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). *(This check-box may be marked only where the time limit under Article 19 has not yet expired.)*

\* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

Language for the purposes of international preliminary examination: English

☒ which is the language in which the international application was filed.☐ which is the language of a translation furnished for the purposes of international search.☐ which is the language of publication of the international application.☐ which is the language of the translation (to be) furnished for the purposes of international preliminary examination.**Box No. V ELECTION OF STATES**The applicant hereby elects all eligible States *(that is, all States which have been designated and which are bound by Chapter II of the PCT)*

excluding the following States which the applicant wishes not to elect:

**Box No. VI CHECK LIST**

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

- |  |   |        |
|--|---|--------|
| 1. translation of international application                              | : | sheets |
| 2. amendments under Article 34   | : | sheets |
| 3. copy (or, where required, translation) of amendments under Article 19 | : | sheets |
| 4. copy (or, where required, translation) of statement under Article 19  | : | sheets |
| 5. letter  | : | sheets |
| 6. other ( <i>specify</i> )  | : | sheets |

For International Preliminary  
Examining Authority use only

received                      not received

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

The demand is also accompanied by the item(s) marked below:

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> fee calculation sheet                             | 4. <input type="checkbox"/> statement explaining lack of signature                                  |
| 2. <input type="checkbox"/> separate signed power of attorney                            | 5. <input type="checkbox"/> nucleotide and or amino acid sequence listing in computer readable form |
| 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: | 6. <input type="checkbox"/> other ( <i>specify</i> ):   |

**Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE**

*Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).*



Munich, 6 April 2001

Dr. Albrecht Dehmel  
European Patent Attorney

For International Preliminary Examining Authority use only

1. Date of actual receipt of DEMAND.

2. Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):

3. ☐ The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.

☐ The applicant has been informed accordingly.

4. ☐ The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of Rule 80.5.

5. ☐ Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82.

For International Bureau use only

Demand received from IPEA on:

# PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) GI-003 PCT

### Box No. I TITLE OF INVENTION

A New Assay to Detect Substances Useful for the Therapy of Cancer and Infectious Diseases

### Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.  
Hofgartenstrasse 8  
80539 München

☐ This person is also inventor.

Telephone No.

Facsimile No.

Teleprinter No.

State (that is, country) of nationality:

DE

State (that is, country) of residence:

DE

This person is applicant for the purposes of

☐ all designated States

☒ all designated States except the United States of America

☐ the United States of America only

☐ the States indicated in the Supplemental Box

### Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

NIELSEN, Erik  
Im Schutzenacker 9  
69181 Leimen

This person is:

☐ applicant only

☒ applicant and inventor

☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

US

State (that is, country) of residence:

DE

This person is applicant for the purposes of

☐ all designated States

☐ all designated States except the United States of America

☒ the United States of America only

☐ the States indicated in the Supplemental Box

☒ Further applicants and or (further) inventors are indicated on a continuation sheet.

### Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☒ agent

☐ common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

DEHMEL, Albrecht  
Dehmel & Bettenhausen  
Müllerstrasse 1  
80469 München

Telephone No.

0049-(0)89-238852-6

Facsimile No.

0049-(0)89-238852-70

Teleprinter No.

☐ Address for correspondence: Mark this check-box where no agent or common representative is has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)	
<i>If none of the following sub-boxes is used, this sheet should not be included in the request.</i>	
<p>Name and address: <i>(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</i></p> <p>CHRISTOPHORIDIS, Savvas Boxbergering 107 69126 Heidelberg</p>	<p>This person is:</p> <p><input type="checkbox"/> applicant only</p> <p><input checked="" type="checkbox"/> applicant and inventor</p> <p><input type="checkbox"/> inventor only <i>(If this check-box is marked, do not fill in below)</i></p>
State <i>(that is, country)</i> of nationality: GR	State <i>(that is, country)</i> of residence: DE
<p>This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box</p>	
<p>Name and address: <i>(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</i></p> <p>MURPHY, Carol Alexandrou Papenastasiou 4 45 500 Anatoli, Ioannina</p>	<p>This person is:</p> <p><input type="checkbox"/> applicant only</p> <p><input checked="" type="checkbox"/> applicant and inventor</p> <p><input type="checkbox"/> inventor only <i>(If this check-box is marked, do not fill in below)</i></p>
State <i>(that is, country)</i> of nationality: IE	State <i>(that is, country)</i> of residence: GR
<p>This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box</p>	
<p>Name and address: <i>(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</i></p> <p>ZERIAL, Marino Heuauerweg 30/1 69124 Heidelberg</p>	<p>This person is:</p> <p><input type="checkbox"/> applicant only</p> <p><input checked="" type="checkbox"/> applicant and inventor</p> <p><input type="checkbox"/> inventor only <i>(If this check-box is marked, do not fill in below)</i></p>
State <i>(that is, country)</i> of nationality: IT	State <i>(that is, country)</i> of residence: DE
<p>This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box</p>	
<p>Name and address: <i>(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</i></p> <p>DE RENZIS, Stefano Meyrhofstrasse 1 69117 Heidelberg</p>	<p>This person is:</p> <p><input type="checkbox"/> applicant only</p> <p><input checked="" type="checkbox"/> applicant and inventor</p> <p><input type="checkbox"/> inventor only <i>(If this check-box is marked, do not fill in below)</i></p>
State <i>(that is, country)</i> of nationality: IT	State <i>(that is, country)</i> of residence: DE
<p>This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box</p>	
<p><input type="checkbox"/> Further applicants and or (further) inventors are indicated on another continuation sheet:</p>	

**Box No.V DESIGNATION OF STATES**

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):


**Regional Patent**

- ☐ **AP ARIPO Patent:** GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☐ **EA Eurasian Patent:** AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP European Patent:** AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☐ **OA OAPI Patent:** BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line) . . . . .

**National Patent (if other kind of protection or treatment desired, specify on dotted line):**

- |   |  |
|---|--|
| <input type="checkbox"/> AE United Arab Emirates                            | <input type="checkbox"/> LC Saint Lucia  |
| <input type="checkbox"/> AG Antigua and Barbuda                             | <input type="checkbox"/> LK Sri Lanka  |
| <input type="checkbox"/> AL Albania . . . . .                               | <input type="checkbox"/> LR Liberia  |
| <input type="checkbox"/> AM Armenia . . . . .                               | <input type="checkbox"/> LS Lesotho . . . . .  |
| <input type="checkbox"/> AT Austria . . . . .                               | <input type="checkbox"/> LT Lithuania  |
| <input type="checkbox"/> AU Australia . . . . .                             | <input type="checkbox"/> LU Luxembourg   |
| <input type="checkbox"/> AZ Azerbaijan                                      | <input type="checkbox"/> LV Latvia   |
| <input type="checkbox"/> BA Bosnia and Herzegovina . . . . .                | <input type="checkbox"/> MA Morocco . . . . .  |
| <input type="checkbox"/> BB Barbados  | <input type="checkbox"/> MD Republic of Moldova . . . . .  |
| <input type="checkbox"/> BG Bulgaria . . . . .                              | <input type="checkbox"/> MG Madagascar . . . . .   |
| <input type="checkbox"/> BR Brazil . . . . .                                | <input type="checkbox"/> MK The former Yugoslav Republic of Macedonia . . . . .                            |
| <input type="checkbox"/> BY Belarus . . . . .                               | <input type="checkbox"/> MN Mongolia   |
| <input type="checkbox"/> BZ Belize  | <input type="checkbox"/> MW Malawi . . . . .   |
| <input checked="" type="checkbox"/> CA Canada                               | <input type="checkbox"/> MX Mexico . . . . .   |
| <input type="checkbox"/> CH and LI Switzerland and Liechtenstein            | <input type="checkbox"/> MZ Mozambique   |
| <input type="checkbox"/> CN China . . . . .                                 | <input type="checkbox"/> NO Norway   |
| <input type="checkbox"/> CR Costa Rica . . . . .                            | <input type="checkbox"/> NZ New Zealand . . . . .  |
| <input type="checkbox"/> CU Cuba . . . . .                                  | <input type="checkbox"/> PL Poland . . . . .   |
| <input type="checkbox"/> CZ Czech Republic . . . . .                        | <input type="checkbox"/> PT Portugal . . . . .   |
| <input type="checkbox"/> DE Germany . . . . .                               | <input type="checkbox"/> RO Romania  |
| <input type="checkbox"/> DK Denmark . . . . .                               | <input type="checkbox"/> RU Russian Federation . . . . .   |
| <input type="checkbox"/> DM Dominica  | <input type="checkbox"/> SD Sudan  |
| <input type="checkbox"/> DZ Algeria . . . . .                               | <input type="checkbox"/> SE Sweden   |
| <input type="checkbox"/> EE Estonia . . . . .                               | <input type="checkbox"/> SG Singapore  |
| <input type="checkbox"/> ES Spain . . . . .                                 | <input type="checkbox"/> SI Slovenia . . . . .   |
| <input type="checkbox"/> FI Finland . . . . .                               | <input type="checkbox"/> SK Slovakia . . . . .   |
| <input type="checkbox"/> GB United Kingdom                                  | <input type="checkbox"/> SL Sierra Leone . . . . .   |
| <input type="checkbox"/> GD Grenada   | <input type="checkbox"/> TJ Tajikistan . . . . .   |
| <input type="checkbox"/> GE Georgia . . . . .                               | <input type="checkbox"/> TM Turkmenistan . . . . .   |
| <input type="checkbox"/> GH Ghana . . . . .                                 | <input type="checkbox"/> TR Turkey . . . . .   |
| <input type="checkbox"/> GM Gambia  | <input type="checkbox"/> TT Trinidad and Tobago . . . . .  |
| <input type="checkbox"/> HR Croatia . . . . .                               | <input type="checkbox"/> TZ United Republic of Tanzania  |
| <input type="checkbox"/> HU Hungary . . . . .                               | <input type="checkbox"/> UA Ukraine . . . . .  |
| <input type="checkbox"/> ID Indonesia                                       | <input type="checkbox"/> UG Uganda . . . . .   |
| <input type="checkbox"/> IL Israel . . . . .                                | <input checked="" type="checkbox"/> US United States of America . . . . .                                  |
| <input type="checkbox"/> IN India . . . . .                                 | <input type="checkbox"/> UZ Uzbekistan . . . . .   |
| <input type="checkbox"/> IS Iceland   | <input type="checkbox"/> VN Viet Nam . . . . .   |
| <input checked="" type="checkbox"/> JP Japan . . . . .                      | <input type="checkbox"/> YU Yugoslavia . . . . .   |
| <input type="checkbox"/> KE Kenya . . . . .                                 | <input type="checkbox"/> ZA South Africa . . . . .   |
| <input type="checkbox"/> KG Kyrgyzstan . . . . .                            | <input type="checkbox"/> ZW Zimbabwe . . . . .   |
| <input type="checkbox"/> KP Democratic People's Republic of Korea . . . . . | Check-box reserved for designating States which have become party to the PCT after issuance of this sheet: |
| <input type="checkbox"/> KR Republic of Korea . . . . .                     | <input type="checkbox"/> . . . . .   |
| <input type="checkbox"/> KZ Kazakhstan . . . . .                            |  |

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)

<b>Box No. VI PRIORITY CLAIM</b>		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is		
		national application: country	regional application: regional Office	international application receiving Office
item (1) 16 September 1999 (16/9/1999)	99 118 385.6	EP		
item (2)				
item (3)				
<input checked="" type="checkbox"/> The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s): <small>* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.</small>				
<b>Box No. VII INTERNATIONAL SEARCHING AUTHORITY</b>				
<b>Choice of International Searching Authority (ISA)</b> <small>(if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):</small>		<b>Request to use results of earlier search; reference to that search</b> <small>(if an earlier search has been carried out by or requested from the International Searching Authority):</small>		
ISA/ EP		Date (day/month/year)	Number	Country (or regional Office)
		28/02/2000	99 118 385.6	EP
<b>Box No. VIII CHECK LIST; LANGUAGE OF FILING</b>				
This international application contains the following number of sheets: request : 4 description (excluding sequence listing part) : 35 claims : 3 abstract : 1 drawings : sequence listing part of description : 34 Total number of sheets : 77		This international application is accompanied by the item(s) marked below: 1 <input checked="" type="checkbox"/> fee calculation sheet 2 <input type="checkbox"/> separate signed power of attorney 3 <input type="checkbox"/> copy of general power of attorney; reference number, if any: 4 <input type="checkbox"/> statement explaining lack of signature 5 <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s) 6 <input type="checkbox"/> translation of international application into (language): 7 <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material 8 <input checked="" type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form 9 <input type="checkbox"/> other (specify): Receipt for documents; crossed cheque		
Figure of the drawings which should accompany the abstract:		Language of filing of the international application: English		
<b>Box No. IX SIGNATURE OF APPLICANT OR AGENT</b>				
<small>Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).</small>				
Munich, September 18, 2000		 Dr. Albrecht Dehmel		
		DEHMEL & BETTENHAUSEN Patentanwälte Müllerstr. 1 D-80469 München		

For receiving Office use only	
1. Date of actual receipt of the purported international application 3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application 4. Date of timely receipt of the required corrections under PCT Article 11(2) 5. International Searching Authority (if two or more are competent): ISA /	2. Drawings: <input type="checkbox"/> received <input type="checkbox"/> not received 6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid

For International Bureau use only
Date of receipt of the record copy by the International Bureau



# PATENT COOPERATION TREATY

From the:  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

<p>To:</p> <p>DEHMEL, Albrecht DEHMEL &amp; BETTENHAUSEN Müllerstrasse 1 D-80469 München ALLEMAGNE</p>	<p>Frist: 22. M VF: 22. 10. 2001</p> <p>Eingegangen 24. Aug. 2001</p> <p><b>DEHMEL &amp; BETTENHAUSEN</b> <i>Patentanwälte</i></p>	<h2 style="margin: 0;">PCT</h2> <h3 style="margin: 0;">WRITTEN OPINION</h3> <p style="margin: 0;">(PCT Rule 66)</p>
		<p>Date of mailing (day/month/year) 22.08.2001</p>
<p>Applicant's or agent's file reference GI-003 PCT</p>		<p><b>REPLY DUE</b>      <b>within 3 month(s)</b> from the above date of mailing</p>
<p>International application No. PCT/EP00/09130</p>	<p>International filing date (day/month/year) 18/09/2000</p>	<p>Priority date (day/month/year) 16/09/1999</p>
<p>International Patent Classification (IPC) or both national classification and IPC C12Q1/44</p>		
<p>Applicant MAX-PLANCK-GESELLSCHAFT ZUR FÖRDERUNG DER...</p>		


1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
  - I    ☒ Basis of the opinion
  - II   ☐ Priority
  - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV   ☐ Lack of unity of invention
  - V    ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI   ☐ Certain document cited
  - VII ☐ Certain defects in the international application
  - VIII ☒ Certain observations on the international application
3. The applicant is hereby **invited to reply** to this opinion.
 

**When?**      See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?**      By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also:**      For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.  
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 16/01/2002.

<p>Name and mailing address of the international preliminary examining authority:</p> <div style="text-align: center;">  </div> <p>European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465</p>	<p>Authorized officer / Examiner</p> <p>Wieser, M</p> <hr/> <p>Formalities officer (incl. extension of time limits)</p> <p>Digiusto, M</p> <p>Telephone No. +49 89 2399 8162</p>
--	--



**WRITTEN OPINION****I. Basis of the opinion**

1. With regard to the **elements** of the international application (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"):

**Description, pages:**

1-69 as originally filed

**Claims, No.:**

1-13 as originally filed

**Sequence listing part of the description, pages:**

36-69, as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☒ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

## WRITTEN OPINION

International application No. PCT/EP00/09130

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

### V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	11
Inventive step (IS)	Claims	12,13
Industrial applicability (IA)	Claims	

2. Citations and explanations  
**see separate sheet**

### VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

## **Section V**

Claims 1-10 refer to the use of an effector of a GTPase, preferably of the Rab family, as a target in drug screening in a vast class of diseases.

The only document cited in the International Search Report which is concerned with GTPase effectors is NATURE, vol.397, 1999, pages 621-25 (document A), which does not disclose or even suggest the use of these effectors in drug screening.

Therefore, the subject-matter of claims 1-10 is considered to be novel and inventive within the meaning of Articles 33(2) and 33(3) PCT.

Claim 11 refers to a kit, merely characterised by containing at least one GTPase effector/regulator molecule. Since such effector/regulator molecules are known in the art (see for instance document A), claim 11 is not novel (Article 33(2) PCT).

The scope of claims 12 and 13 encompasses a kit additionally containing a GTPase, preferably of the Rab family. A skilled person when performing the experiments described in document A, is using these two substances. No inventive step is involved in merely packing these well known compounds into a kit of parts. The claims do not meet the requirements of Article 33(3) PCT.

## **Section VIII**

The claims are not supported by the description (Article 6 PCT), which does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a skilled person (Article 5 PCT). The description does not contain any information concerning the usefulness of a substance identified by the screening assay of claims 1-10 as pharmaceutical agent. The assay described in the examples allows only to determine whether or not a substance tested modulates the activity of an GTPase effector.

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

To:  DEHMEL, Albrecht DEHMEL & BETTENHAUSEN Müllerstrasse 1 D-80469 München ALLEMAGNE	Frist: VF:  Eingegangen 21. Dez. 2001  <b>DEHMEL &amp; BETTENHAUSEN</b> <i>Patentanwälte</i>	NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Rule 71.1)  Date of mailing (day/month/year) 18.12.2001
Applicant's or agent's file reference GI-003 PCT		<b>IMPORTANT NOTIFICATION</b>
International application No. PCT/EP00/09130	International filing date (day/month/year) 18/09/2000	Priority date (day/month/year) 16/09/1999
Applicant MAX-PLANCK-GESELLSCHAFT ZUR FÖRDERUNG DER...		


1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

#### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Digiusto, M  Tel. +49 89 2399-8162
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## PATENT COOPERATION TREATY

## PCT

REC'D 27 DEC 2001

WIPO

PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

4

Applicant's or agent's file reference GI-003 PCT	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP00/09130	International filing date (day/month/year) 18/09/2000	Priority date (day/month/year) 16/09/1999
International Patent Classification (IPC) or national classification and IPC C12Q1/44		
Applicant MAX-PLANCK-GESELLSCHAFT ZUR FÖRDERUNG DER...		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 4 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  06/04/2001	Date of completion of this report  18.12.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Wieser, M  Telephone No. +49 89 2399 8434 

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP00/09130

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-69 as originally filed

**Claims, No.:**

1-13 as originally filed

**Sequence listing part of the description, pages:**

36-69, as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☒ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/EP00/09130

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims	1-10,12,13
	No:	Claims	11
Inventive step (IS)	Yes:	Claims	1-10
	No:	Claims	12,13
Industrial applicability (IA)	Yes:	Claims	1-13
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**



## **Section V**

Claims 1-10 refer to the use of an effector of a GTPase, preferably of the Rab family, as a target in drug screening in a vast class of diseases.

The only document cited in the International Search Report which is concerned with GTPase effectors is NATURE, vol.397, 1999, pages 621-25 (document A), which does not disclose or even suggest the use of these effectors in drug screening.

Therefore, the subject-matter of claims 1-10 is considered to be novel and inventive within the meaning of Articles 33(2) and 33(3) PCT.

Claim 11 refers to a kit, merely characterised by containing at least one GTPase effector/regulator molecule. Since such effector/regulator molecules are known in the art (see for instance document A), claim 11 is not novel (Article 33(2) PCT).

The scope of claims 12 and 13 encompasses a kit additionally containing a GTPase, preferably of the Rab family. A skilled person when performing the experiments described in document A, is using these two substances. No inventive step is involved in merely packing these well known compounds into a kit of parts. The claims do not meet the requirements of Article 33(3) PCT.

## **Section VIII**

The claims are not supported by the description (Article 6 PCT), which does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a skilled person (Article 5 PCT). The description does not contain any information concerning the usefulness of a substance identified by the screening assay of claims 1-10 as pharmaceutical agent. The assay described in the examples allows only to determine whether or not a substance tested modulates the activity of an GTPase effector.

Claims to the use of a substance in an in vivo assay, wherein human beings are not explicitly excluded from the test organisms, could lead to problems in various national jurisdictions.

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE  
in its capacity as elected Office

<b>Date of mailing</b> (day/month/year) 15 May 2001 (15.05.01)	
<b>International application No.</b> PCT/EP00/09130	<b>Applicant's or agent's file reference</b> GI-003 PCT
<b>International filing date</b> (day/month/year) 18 September 2000 (18.09.00)	<b>Priority date</b> (day/month/year) 16 September 1999 (16.09.99)
<b>Applicant</b> NIELSEN, Erik et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
06 April 2001 (06.04.01)

☐ in a notice effecting later election filed with the International Bureau on:  
\_\_\_\_\_

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	<b>Authorized officer</b> Catherine Massetti Telephone No.: (41-22) 338.83.38
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## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>GI-003 PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP 00/09130</b>	International filing date (day/month/year) <b>18/09/2000</b>	(Earliest) Priority Date (day/month/year) <b>16/09/1999</b>
Applicant <b>MAX-PLANCK-GESELLSCHAFT ZUR FÖRDERUNG DER...</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

**ASSAY TO DETECT SUBSTANCES USEFUL FOR THERAPY**

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.



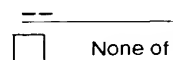
as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures.



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>6</sup>:</b> <b>C12N 15/55, 15/86, 5/10, 9/16, C07K 16/40, C12Q 1/68, A61K 38/46</b>	<b>A3</b>	<b>(11) International Publication Number:</b> <b>WO 98/18942</b> <b>(43) International Publication Date:</b> 7 May 1998 (07.05.98)
<b>(21) International Application Number:</b> PCT/US97/18581 <b>(22) International Filing Date:</b> 14 October 1997 (14.10.97)  <b>(30) Priority Data:</b> 08/741,411                      29 October 1996 (29.10.96)                      US  <b>(71) Applicant (for all designated States except US):</b> INCYTE PHARMACEUTICALS, INC. [US/US]; 3174 Porter Drive, Palo Alto, CA 94304 (US).  <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> BANDMAN, Olga [US/US]; 366 Anna Avenue, Mountain View, CA 94043 (US). AU-YOUNG, Janice [US/US]; 1419 Kains Avenue, Berkeley, CA 94702 (US).  <b>(74) Agent:</b> BILLINGS, Lucy, J.; Incyte Pharmaceuticals, Inc., 3174 Porter Drive, Palo Alto, CA 94304 (US).	<b>(81) Designated States:</b> AT, AU, BR, CA, CH, CN, DE, DK, ES, FI, GB, IL, JP, KR, MX, NO, NZ, RU, SE, SG, US, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>  <b>(88) Date of publication of the international search report:</b> 3 September 1998 (03.09.98)	
<b>(54) Title:</b> NOVEL HUMAN RAB PROTEINS  <b>(57) Abstract</b>  The present invention provides four human Rab and Rab-associated proteins (designated collectively as HRAB) and polynucleotides which identify and encode HRAB. The invention also provides genetically engineered expression vectors and host cells comprising the nucleic acid sequences encoding HRAB and a method for producing HRAB. The invention also provides for use of HRAB and agonists, antibodies, or antagonists specifically binding HRAB, in the prevention and treatment of diseases associated with expression of HRAB. Additionally, the invention provides for the use of antisense molecules to polynucleotides encoding HRAB for the treatment of diseases associated with the expression of HRAB. The invention also provides diagnostic assays which utilize the polynucleotide, or fragments or the complement thereof, and antibodies specifically binding HRAB.		

**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
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BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>6</sup> :</b> <b>C12N 15/55, 15/86, 5/10, 9/16, C07K 16/40, C12Q 1/68, A61K 38/46</b>	<b>A3</b>	<b>(11) International Publication Number:</b> <b>WO 98/18942</b> <b>(43) International Publication Date:</b> 7 May 1998 (07.05.98)
<b>(21) International Application Number:</b> PCT/US97/18581 <b>(22) International Filing Date:</b> 14 October 1997 (14.10.97) <b>(30) Priority Data:</b> 08/741,411 29 October 1996 (29.10.96) US <b>(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application</b> US 08/741,411 (CIP) Filed on 29 October 1996 (29.10.96) <b>(71) Applicant (for all designated States except US):</b> INCYTE PHARMACEUTICALS, INC. [US/US]; 3174 Porter Drive, Palo Alto, CA 94304 (US). <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> BANDMAN, Olga [US/US]; 366 Anna Avenue, Mountain View, CA 94043 (US). AU-YOUNG, Janice [US/US]; 1419 Kains Avenue, Berkeley, CA 94702 (US). <b>(74) Agent:</b> BILLINGS, Lucy, J.; Incyte Pharmaceuticals, Inc., 3174 Porter Drive, Palo Alto, CA 94304 (US).	<b>(81) Designated States:</b> AT, AU, BR, CA, CH, CN, DE, DK, ES, FI, GB, IL, JP, KR, MX, NO, NZ, RU, SE, SG, US, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> <b>(88) Date of publication of the international search report:</b> 3 September 1998 (03.09.98)	
<b>(54) Title:</b> NOVEL HUMAN RAB PROTEINS <b>(57) Abstract</b> <p>The present invention provides four human Rab and Rab-associated proteins (designated collectively as HRAB) and polynucleotides which identify and encode HRAB. The invention also provides genetically engineered expression vectors and host cells comprising the nucleic acid sequences encoding HRAB and a method for producing HRAB. The invention also provides for use of HRAB and agonists, antibodies, or antagonists specifically binding HRAB, in the prevention and treatment of diseases associated with expression of HRAB. Additionally, the invention provides for the use of antisense molecules to polynucleotides encoding HRAB for the treatment of diseases associated with the expression of HRAB. The invention also provides diagnostic assays which utilize the polynucleotide, or fragments or the complement thereof, and antibodies specifically binding HRAB.</p>		

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 97/18581

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/55 C12N15/86 C12N5/10 C12N9/16 C07K16/40  
C12Q1/68 A61K38/46

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WILSON D.B., WILSON M.P.: "Identification and subcellular localization of human rab5b, a new member of the ras related superfamily of GTPases" JOURNAL OF CLINICAL INVESTIGATION, vol. 89, 1992, NEW YORK, US, pages 996-1005, XP002057689 see abstract see the whole document ---	1-12, 18, 19
X	CHEN D. ET AL.: "Molecular cloning of two novel rab genes from human melanocytes" GENE., vol. 174, 26 September 1996, AMSTERDAM NL, pages 129-134, XP002057690 see the whole document ---	1-10, 12, 18, 19
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

5 March 1998

Date of mailing of the international search report

16-07-1998

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Panzica, G

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ZAHRAOUI A ET AL: "THE HUMAN RAB GENES ENCODE A FAMILY OF GTP-BINDING PROTEINS RELATED TO YEAST YPT1 AND SEC4 PRODUCTS INVOLVED IN SECRETION" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 264, no. 21, 25 July 1989, pages 12394-12401, XP002015899 see the whole document ---	1-10,18, 19
X	EMBL Database, Heidelberg, DE AC: Q13636 "Low MR GTP-binding protein RAB31" Homo Sapiens Author: Bao X. et al. 01-10-96. XP002057691 see abstract ---	1-12
X	EMBL DataBase, Heidelberg, DE AC:N75242 "yz73gl2.r1 Homo sapiens cDNA clone 288742 5' similar to PIR:S40208 rab22 protein - dog. EST Author: Hillier L. et al. 05-04-1996 XP002057692 see abstract ---	1-7,18, 19
A	WO 89 02898 A (US ARMY) 6 April 1989 ---	12-14
A	LUETCKE A ET AL: "CLONING AND SUBCELLULAR LOCALIZATION OF NOVEL RAB PROTEINS REVEALS POLARIZED AND CELL TYPE-SPECIFIC EXPRESSION" JOURNAL OF CELL SCIENCE, vol. 107, no. PART 12, December 1994, pages 3437-3448, XP000604112 -----	



# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 97/18581

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos. .  
because they relate to subject matter not required to be searched by this Authority, namely:  
Remark: Although claim(s) 15-17  
is(are) directed to a method of treatment of the human/animal  
body, the search has been carried out and based on the alleged  
effects of the compound/composition.
2. ☐ Claims Nos. .  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such  
an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos. .  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See annex

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all  
searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment  
of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report  
covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is  
restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-19

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

## 1. Claims: 1-19

An isolated and purified human Rab A (HRABA) protein comprising the aminoacid sequence of Seq. Id. No. 1 or fragments thereof, a nucleic acid sequence encoding for it, comprising Seq. Id. No. 2 or variants thereof; probes, vectors, hosts, production methods thereof, antibodies, agonists and antagonists, their uses, and therapeutic methods therewith.

## 2. Claims: 20-28

Idem as Subject 1 but limited to human Rab B (hRabB, Seq.Id.Nos. 3 and 4)

## 3. Claims: 39-57

Idem as Subject 1 but limited to human Rab C (hRabC, Seq.Id.Nos. 5 and 6)

## 4. Claims: 58-76

Idem as Subject 1 but limited to human Rab D (hRabD, Seq.Id.Nos. 7 and 8)

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/US 97/18581

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 8902898 A	06-04-89	US 4870161 A	26-09-89
		AU 2541488 A	18-04-89
		EP 0393067 A	24-10-90
		JP 2504032 T	22-11-90
		US 5436320 A	25-07-95
		US 5428134 A	27-06-95
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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/09130

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12Q1/44

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12Q G01N C07K C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 42839 A (INCYTE PHARMA INC ;GUEGLER KARL J (US); HILLMAN JENNIFER L (US)) 1 October 1998 (1998-10-01) the whole document ---	1-13
X	WO 98 18942 A (INCYTE PHARMA INC ;AU YOUNG JANICE (US); BANDMAN OLGA (US)) 7 May 1998 (1998-05-07) the whole document ---	1-13
X	WO 97 00955 A (INCYTE PHARMA INC) 9 January 1997 (1997-01-09) the whole document ---	1-13
X	EP 0 856 583 A (WADA MANABU ;JAPAN SCIENCE AND TECHNOLOGY C (JP)) 5 August 1998 (1998-08-05) the whole document --- -/--	1-13

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex

\* Special categories of cited documents :

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*&\* document member of the same patent family

Date of the actual completion of the international search

20 November 2000

Date of mailing of the international search report

04/12/2000

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/09130

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	<p>CHRISTOFORIDIS S. ET AL.: "The Rab5 effector EEA1 is a core component of endosome docking"</p> <p>NATURE, vol. 397, 18 February 1999 (1999-02-18), pages 621-625, XP002153257 cited in the application the whole document</p> <p>-----</p>	1-13

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 00/09130

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
W0 9842839	A	01-10-1998	US 5843717 A AU 6774198 A US 6010859 A	01-12-1998 20-10-1998 04-01-2000
W0 9818942	A	07-05-1998	US 6124116 A AU 4903397 A	26-09-2000 22-05-1998
W0 9700955	A	09-01-1997	AU 6337596 A CA 2224247 A EP 0833908 A	22-01-1997 09-01-1997 08-04-1998
EP 0856583	A	05-08-1998	JP 10210971 A	11-08-1998